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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
AUGHENBAUGH, WALTER

ART UNIT	PAPER NUMBER
1772	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No.	Applicant(s)
	09/993,733	JOHNSON, GREGORY D.
	Examiner	Art Unit
	Walter B Aughenbaugh	1772

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 07 October 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☒ The period for reply expires *6* months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☒ The proposed amendment(s) will not be entered because:

   (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ they raise the issue of new matter (see Note below);

   (c) ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☒ The a)☒ affidavit, b)☐ exhibit, or c)☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: *See continuation sheet*.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☐ For purposes of Appeal, the proposed amendment(s) a)☒ will not be entered or b)☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: *21*.

   Claim(s) rejected: *1-12, 14-28 and 39-42*.

   Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.

10. ☐ Other: _____

ADVISORY ACTION

Acknowledgement of Applicant's Amendments

1. The amendments made in claims 6-8, 18 and 21 made in Applicant's After Final Amendment filed October 7, 2003 (Paper 7) have not been entered due to the fact that they raise new issues that would require further consideration and/or search. The amendments made in claim 18 raise new issues that would require further consideration and/or search.

ANSWERS TO APPLICANTS ARGUMENTS

2. Applicant's arguments regarding the 35 U.S.C. 103 rejection of claims 1-12, 14-17, 22, 25-28 and 39-42 made of record in Paper 5 have been fully considered but are not persuasive.

Applicant's argument on page 6 of Paper 7 that "the disclosure of steel is minimal" in Sobolev is irrelevant; Sobolev plainly discloses steel. Applicant alleges that steel is "being used in an example that failed" in Sobolev because "In this example, the plastic core cracked under the impact test". Applicant fails to acknowledge that the example cited by Applicant (which begins under the heading "EXAMPLE II" located in col. 19 and ends in col. 20) discusses two laminates: a laminate having steel as the metal and a laminate having aluminum as the metal (col. 19, lines 47-52 and lines 56-58). Applicant fails to acknowledge that Sobolev teach that "both laminates [having steel and having aluminum] exhibited slight cracking of the core but no delamination in the impact test" (col. 19, lines 59-61). Since Sobolev teach that "the preferred facing material is aluminum" and since Sobolev teach that the laminate having steel and the laminate having aluminum both "exhibited slight cracking of the core but no delamination in the impact test", Applicant's statement that steel is "used in an example that failed" is entirely fallacious; Sobolev teaches that SLIGHT cracking occurred in both the laminate having steel and

in the preferred laminate having aluminum, where no distinction whatsoever is made by Sobolev to differentiate the degree of SLIGHT cracking observed between the two laminates. Sobolev then continues EXAMPLE II by teaching that a second laminate having aluminum was fabricated using a "slightly more flexible epoxy resin mixture" for the core (col. 19, lines 62-64), and that this "second aluminum panel passed the impact test with no sign of delamination or core cracking" (col. 19, lines 65-67) and that "This improvement was primarily due to the improved toughness of the resin" (col. 19, lines 67-68). Sobolev does not in any way teach that the choice of metal (steel or aluminum) plays a role in the extent of core cracking observed as Applicant would suggest based on Applicant's arguments. Since Sobolev did not run a test with the "slightly more flexible epoxy resin mixture" and steel as laminate components to determine the extent, or lack thereof, of core cracking for comparison with the "slightly more flexible epoxy resin mixture" and aluminum as laminate components that Sobolev did test, absolutely nothing can be inferred from Sobolev's teachings as to which metal (steel or aluminum) is the superior material in terms of core cracking. Sobolev solely teaches that the improvement in extent of core cracking "was primarily due to the improved toughness of the resin" (col. 19, lines 67-68). Applicant's statement that "To one skilled in the art, this suggests that the steel was too hard and thus transmitted too much force on impact" can simply not be made with any support whatsoever since steel is never even tested in combination with the "slightly more flexible epoxy resin mixture" that enables the "second aluminum panel [to pass] the impact test with no sign of delamination or core cracking". "One skilled in the art" would need to see the test results for a "slightly more flexible epoxy resin mixture"/steel laminate before drawing any conclusions such as Applicant's baseless assertion that "To one skilled in the art, this suggests that the steel was

too hard and thus transmitted too much force on impact". Finally, note that Sobolev plainly states that "Although the preferred facing material is aluminum, other metals can also be used to advantage" and then goes on to teach that a laminate having the same resin and either aluminum or steel both "exhibited slight cracking of the core but no delamination in the impact test"; i.e. steel is a metal that "can also be used to advantage" as taught by Sobolev.

Applicant argues on the top of page 7 of Paper 7 that "Fitzgerald et al. does not disclose that high-density polyethylene can be used in a panel", but it would be difficult for Fitzgerald et al. to "disclose that high-density polyethylene can be used in a panel" any more clearly than is disclosed in col. 3, lines 11-15. Applicant states that Fitzgerald et al. "discloses that high-density polyethylene is strong enough to be used by itself in a concrete form, though only for test specimens", but this is a teaching of intended use which does not supercede the fact that Fitzgerald et al. discloses that high-density polyethylene can be used in a panel; it has been held that a recitation with respect to the manner in which a claimed article is intended to be employed does not differentiate the claimed article from a prior art article satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQd 1647 (1987). Furthermore, Examiner affords no structural distinction between each of the individual walls (items 10, 12 and 14) of the plastic panel that forms the "beam mold for forming a concrete beam" of Fitzgerald et al. (col. 3, lines 4-6 and lines 9-13) and the concrete formwork panel as claimed in the instant application. Applicant's argument that Fitzgerald et al. "teaches that polyethylene releases easily from concrete" is insubstantial because Applicant's statement that ease of release "may be a negative since in a panel a material that sticks and does not release is desireable" isn't conclusive.

Applicant argues that a prima facie case of obviousness has not been established since "the use of high-density polyethylene in a panel, is missing", but Fitzgerald et al. clearly teaches "the use of high-density polyethylene in a panel" as discussed above. Applicant argues that a prima facie case of obviousness has not been established because "there is no reasonable expectation of success, since the plastic core in one panel in which steel was used in Sobolev cracked under the impact test", but the plastic core in one panel in which aluminum (Sobolev's preferred metal) was used cracked under the impact test to the same extent that the laminate having steel cracked (i.e. slight cracking), and therefore, Sobolev actually establishes reasonable expectation of success with steel as the metal since the core cracking results of the laminate having steel were identical (slight cracking) to those of the laminate having aluminum and the same resin of the laminate having steel as discussed above. Applicant then argues that "there is no reason to expect that high-density polyethylene and steel will bond well, since no such bonding is disclosed", but the degree of the bond strength to which Applicant is presumably referring is irrelevant because Applicant does not claim anything about how "well" the steel bonds to the high-density polyethylene (how strong the bond strength between the steel and the high-density polyethylene is). Applicant then argues that "the use of high-density polyethylene in a panel... is not suggested in the references", but the use of high-density polyethylene in a panel is explicitly taught by Fitzgerald et al. as discussed above. It is Examiner's position that a prima facie case of obviousness was established in the 35 U.S.C. 103 rejection of claims 1-12, 14-17, 22, 25-28 and 39-42 made of record in Paper 5, and that the subject matter claimed in claims 1-12, 14-17, 22, 25-28 and 39-42 would be arrived at by one of ordinary skill in the art from the combination of the teachings of Sobolev and Fitzgerald et al. Applicant argues that "it does not

emerge that a panel out of steel and high-density polyethylene would be particularly useful for making concrete formwork panels", but the requirement that a "particularly useful" embodiment "emerge" from combination of references in making a 35 U.S.C. 103 rejection does not exist in the patent law, patent case law or MPEP.

Applicant points out that Edward Rahe, "Vice-President of Engineering for the leading concrete formworks manufacturer in the United States [who] has tested scores of different concrete formwork panels as part of his job" states his opinion in the Declaration that "the panel described by claim 1 of this application is the best he has ever tested", and Applicant alleges that the results of the testing (the data provided in Exhibit B) is "surprising to one skilled in the art", and Mr. Rahe also states that the results described in paragraph 10 of his Declaration and Exhibit B are surprising (paragraph 11 of Mr. Rahe's declaration). However, Applicant has not met the burden on Applicant to establish that these results are unexpected and significant in that the evidence relied upon does not establish "that the differences in results are in fact unexpected and unobvious and of both statistical and practical significance" *Ex parte Gelles*, 22 USPQ2d 1318, 1319 (Bd. Pat. App. & Inter. 1992). Furthermore, the claimed invention has not been compared with the closest prior art which is commensurate in scope with the claims as required by MPEP 716.02(b); the comparison of the panel of the instant application with the "HDO" panels discussed in paragraph 10 of the Declaration of Mr. Rahe is a moot comparison because the "HDO" panels aren't described as being the closest prior art which is commensurate in scope with the claims. In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

Applicant argues that "the foam density limitations of claims 11 and 12, include limitations nowhere disclosed in any of the references for any panel" and that the *In re Boesch* case law is not applicable since "the values claimed are outside the ranges in the prior art", however, as Examiner made of record on pages 15-16 of Paper 5, Sobolev does not teach any range of gas by volume (i.e. a range having lower and upper limits of gas by volume) but does teach the variation of the volume of gas per unit volume of the foam core layer as made of record in the rejection of claims 11 and 12 in Paper 5, which would motivate one of ordinary skill in the art to determine the optimal value of gas by volume of the foam core for the particular desired end result. Applicant argues that Examiner relies on Examiner's opinion in the rejection of claims 6-8, 14-17 and 22, the rejections to these claims do not rely on Examiner's opinion.

3. Applicant's arguments regarding the 35 U.S.C. 103 rejection of claim 18 made of record in Paper 5 have been fully considered but are not persuasive. As made of record in paragraph 17 of Paper 5, Fitzgerald et al. teaches a flange, and one of ordinary skill in the art would have recognized to have formed the flange of Fitzgerald et al. such that it has the structure that is taught by Toedter.

4. Applicant's arguments regarding the 35 U.S.C. 103 rejection of claims 19 and 20 made of record in Paper 5 have been fully considered but are not persuasive. As made of record in paragraph 18 of Paper 5, Lee teaches a cylindrical panel, and one of ordinary skill in the art would have recognized to have formed the panel of Sobolev and Fitzgerald et al. in the shape taught by Lee.

5. Applicant's arguments regarding the 35 U.S.C. 103 rejection of claim 23 made of record in Paper 5 have been fully considered but are not persuasive. As made of record in paragraph 19

of Paper 5, since Yoshida et al. disclose a concrete formwork provided with a plurality of ribs to strengthen the plate of the formwork, one of ordinary skill in the art would have recognized to have attached a strengthening rib to the metal backing layer of the panel of Sobolev and Fitzgerald et al. in order to strengthen the panel as taught by Yoshida et al.

6. Applicant's arguments regarding the 35 U.S.C. 103 rejection of claims 23 and 24 made of record in Paper 5 have been fully considered but are not persuasive. Applicant's arguments depend entirely on the arguments against the 35 U.S.C. 103 rejection of claims 1-12, 14-17, 22, 25-28 and 39-42 made of record in Paper 5 that have been addressed above.

7. Applicant's arguments regarding the 35 U.S.C. 103 rejection of claims 39-41 made of record in Paper 5 have been fully considered but are not persuasive. As made of record in paragraph 21 of Paper 5, while Sobolev does not explicitly teach that the foam plastic is 32% or more by gas, Sobolev teaches variation of density of the core layer via control of the volume of gas per unit volume of the core layer and therefore motivates one of ordinary skill in the art would have recognized to determine the optimal value of gas by volume of the foam core for the particular desired end result as discussed above in regard to claims 11 and 12. Contrary to Applicant's arguments, *In re Boesch* applies because Sobolev does not teach 30% as the "maximum gas core density reduction" (i.e. as the maximum in a range) as Applicants alleged in Paper 4. The claimed ranges are not excluded by Sobolev, and as made of record in paragraph 21 of Paper 5, one of ordinary skill in the art would have recognized to have varied the size of the microballoon filler, and therefore the "gas by volume" value of the foam plastic, or to have experimented with different foaming agents and different amounts of a given foaming agent as known by those of ordinary skilled in the art as taught by Sobolev, via routine experimentation in

order to achieve the optimal "gas by volume" amount as claimed by Applicants, i.e. volume of gas per unit volume of the core layer expressed as a percentage, that achieves the desired laminate weight depending on the desired end result as taught by Sobolev, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art in the absence of unexpected results. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

8. The declaration of Edward Rahe has been received and considered by Examiner. The effectiveness of this declaration is discussed on page 6 of this Office Action.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter B. Aughenbaugh whose telephone number is 703-305-4511. The examiner can normally be reached on Monday-Thursday from 9:00am to 6:00pm and on alternate Fridays from 9:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on 703-308-4251. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

wba
10/21/03 WBA

HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

10/21/03